



LIU's effluent treatment plant.

ALL CREDITS: LIU



Leather Industries of Uganda Jinja, Uganda

Leather Industries of Uganda (LIU) is a company that has turned its fortunes around. In 2007 it came under pressure from the local authorities in the town of Jinja because of inadequate environmental management at that time; they threatened to close the tannery down. Ten years on, following a series of awards for good environmental practice, LIU is something of a beacon, an example of how things can and must be done, in East Africa as in all parts of the world.

The story is complex. Industrial Promotion Services (IPS), which owns and runs tanneries in the East African countries of Uganda, Kenya and Tanzania, is the industrial and infrastructure development arm of the Aga Khan Fund for Economic Development (AKFED). The fund is an affiliate of the Aga Khan Development Network, a group of private, non-denominational

A decade ago, Leather Industries of Uganda faced a real threat of closure because of inadequate environmental management. After a complete overhaul and substantial investment in people and technology, the facility now serves as a landmark for the leather industry in Uganda, in East Africa and, perhaps, across the whole of the continent. It now describes itself as “a wastewater treatment plant with a tannery attached”.



LIU was the first tanner in the region to put a chrome recovery plant in place, sourcing the technology from Indian supplier SVV.



Pressure sand filters are in place to help LIU make the liquid effluent it discharges as clear as possible.

development agencies whose mandates range from the fields of health and education to architecture, rural development and the promotion of private-sector enterprise.

Uganda's assets include a decent cattle population, high numbers of educated young people and vast water resources from its access to important bodies of water such as Lake Victoria and the River Nile. The country's particular requirements include a need for industrialisation to create more employment. Working with the public and private sectors, IPS sets out to identify projects with a strong development potential and commercial viability and to build up companies with "lasting institutional strength" that contribute to long-term national and regional development.

Within Uganda, in collaboration with various partners, IPS has already co-developed a hydro-electric project with a 250 megawatt capacity at Bujagali. It describes this as one of Uganda's most successful public-private partnerships to date and a model for the East African region. Since commissioning in 2012, Bujagali has produced clean, affordable and reliable power for the country, enabling social and economic development. On a smaller scale, IPS has also invested in, and manages, a 3.5 megawatt hydropower project in the West Nile region. It describes this off-grid project as another successful public-private partnership for rural electrification that has transformed the quality of life of the people living in the West Nile region.

On the industrial front in Uganda, IPS owns and supports the management of a fishing net manufacturing plant, providing fishermen with locally produced nets that are compliant with industry best practice. It also owns a manufacturing facility that produces pharmaceuticals for the local and regional markets. And then it has the LIU tannery. The opportunity to create value from a by-product of the meat industry, creating employment, helping leather-related small and medium enterprises to grow, and

earning foreign exchange from exports, attracted IPS to the idea of investing in the leather sector across East Africa.

In partnership with government

IPS's interest in the tannery in Jinja is long-running, dating back to 1995 when it acquired a government-owned tannery there. Jinja is a town of around 75,000 people, located on the shores of Lake Victoria. It continues to be a hub for the leather industry in Uganda as home to five tanneries. In the past these leather manufacturing facilities developed a reputation among the people of the town for being less than ideal neighbours because of the pungent smell that sometimes prevailed in the air. In the early 2000s, Jinja's tanneries came under considerable pressure from the local community either to address the problem of poor air quality or cease production pending inspection by Uganda's National Environmental Agency (NEMA).

It has long been possible, in Africa as in other parts of the world, for companies facing environmental challenges to buy themselves a little breathing space, but it's hardly a sustainable solution to the problem.

According to Niaz Hirani, head of the leather sector for IPS, the effluent treatment plant that was in place when his organisation acquired LIU was insufficient to cope with the company's growth. "The process of converting raw hides and skins into leather can, potentially, have a negative environmental impact, considering the organic material involved and the various chemicals used in the tanning process. All this can put a fragile eco-system at risk. We recognise this and have made a concerted effort to promote environmental sustainability throughout our operations." He adds that, in recent years, LIU has "minimised its environmental footprint" by reducing water consumption and the waste it generates by more than 50%. The LIU management team acknowledges that its



People of promise. Shina Nakivumbi joined LIU with a qualification in electrical installation. Within a few years, she has worked her way up to be able to take overall charge of environment, health and safety at the tannery in Jinja, has spent time working in China and is preparing to study environmental law.

environmental management during those years was “not stringent enough”, but it made a commitment to overhaul the facility and its operations and transform it into one that would attain high environmental standards. As soon as NEMA developed and released national standards, LIU adopted them. Today, the tannery is “the benchmark for the tanning industry in East Africa” in terms of environmental treatment, IPS says.

Improvement brings rewards

In 2013, LIU received two honours at the Resource Efficient and Cleaner Production Awards, a programme focused on multiple industries that is run by the UNIDO- and World Bank-backed Uganda Clean Production Centre (under a project called LVEMP, the Lake Victoria Environmental Management Project). LIU's awards were in recognition for its work to reduce water consumption and for excellence in wastewater management. The following year, Kenya's National Cleaner Production Centre bestowed an East African regional award for wastewater management on LIU, proof that the Jinja-based tannery's commitment to environmental sustainability was bearing fruit.

IPS says it believes in hiring local expertise to find solutions to local problems at its portfolio of companies, including LIU. In 2010, it recruited Nelson Agaba, one of the NEMA-trained inspectors who had been assessing the tannery's environmental performance. Serious, studious and quietly spoken, Mr Agaba is now LIU's head of operations. He joined as environmental manager after two years at NEMA, and having worked previously in roles monitoring water quality for the fisheries sector and on general environmental management at Uganda's Geological Survey and Mines department. He says he was ready to leave NEMA at the time and had thought about setting up his own consulting business, undertaking environmental impact assessments and carrying out environmental

audits for companies in all sectors. The assessments coming across his desk at the time seemed to him to contain “a lot of copy and paste” and he reckoned he could offer more than that. “I remember meetings at NEMA about LIU,” he recalls. “The office-based people were able, of course, to say that the tannery's effluent treatment in those days was not compliant and if they visited the facility they would be able to tell that the smell was bad, but they were not able to suggest solutions to change this situation. I wanted to take a different approach. I wanted to be friendly, to offer advice and help and to give the company time to improve. This ended in LIU offering me a job and I left NEMA.”

First steps

The early moments were difficult; he confesses to having felt like resigning after just one day. A friend advised him to stick with it and learn as much as possible about not just seeing the challenges a manufacturing business can encounter, but also to understand them and be “part of the solution”. Seven years later, he's still there and has risen to the position of operations manager.

With environmental matters the most urgent aspect of the task ahead of him, he wasted no time in putting improvements in place. In the course of his first month, he placed an order with Italprogetti for air-diffusers and screens to make the tanks in the effluent treatment plant more efficient, making LIU the first facility in East Africa to use this technology. In 2011, the management invested in a chrome-recovery plant from an Indian technology provider, SVV Engineering, another first for a tannery in this region. In 2012, LIU constructed primary and secondary clarification tanks and a new filter press for sludge. By 2013, as noted, the pressure from the local authorities had eased and awards began to flow. And in 2015, LIU became the first tannery in Uganda and in all of sub-Saharan Africa (excluding South Africa) to begin engaging with multi-stakeholder



When construction of a large, new aeration tank and a denitrification system is complete, LIU believes it will have the most advanced tannery wastewater treatment plant in Uganda and, possibly, in the whole of Africa.

body the Leather Working Group (LWG), undergoing and passing its first audit in 2016. Many of these achievements were also down to a strategic partnership that has been building up for several years with Chinese tannery, Asiatan, LIU's main customer. In the face of all this progress, Mr Agaba, together with Asiatan has now taken responsibility for environmental management at the IPS tanneries in Kenya and Tanzania, in addition to his role in Jinja. "I like visiting the other tanneries in the group," he says, "and I also like being able to run LIU without any external pressure. I feel very comfortable with the level LIU has reached now and would like to achieve the same for the other two tanneries. When I joined, LIU was facing a challenging time. Now we are at the high point and we want the other two to come up to this level. Taking part in an LWG audit was difficult but it was important to me as an environmentalist, and to the company, to take part. We have to improve and keep improving and we know we still have a long way to go but our target is to get a gold rating." His name is often on the list of speakers now when NEMA and other government organisations arrange multi-industry workshops or conferences on environmental management.

Overview of production

LIU works from wet salted hides to wet blue, focusing 100% at the moment on cattle hides. It's hard, the head of operations believes, for a tannery in this part of the world to penetrate the international market for finished leather. Raw material arrives wet salted from the different regions of Uganda. The tannery removes the salt manually and sends it back to suppliers for reuse. After weighing and a selection assessment of the hides, it trims them and the trimmings then go by forklift to neighbouring tannery Skyfat for shipment to South Africa for gelatin production (a small joint venture between the two Jinja operators).

Next, the hides go into the company's seven 3.5 x 3.5 liming

drums for soaking. One of the seven drums, which Mr Agaba calls the "overload drum" has shelves; it's one of two shelf-enabled drums LIU invested in two years ago (the other is in use in the tanning operation). It intends to invest in two more. Fleshing follows, using a Rizzi fleshing machine that has been in place since 2006. "It used to break down a lot," Mr Agaba says, "but we opened it up, saw where the problem was, bought some new parts from the same suppliers as Rizzi uses itself and it's fine, especially as we maintain it better than we used to." LIU has a splitting machine, from Poletto, but it's currently moth-balled because what the company's customers want is full-substance wet blue.

After weighing the hides again to determine the chemical formulation, they go into the tanning drums, of which there are three at the moment, with a fourth planned, serviced from a mezzanine. As mentioned, one of the three is another "overload drum"; the head of operations says he uses this name because unlike in conventional drums, you can "overload" these ones, which is to say you can load hides beyond the level of the axle. "I wouldn't say we had seen a big change in quality," Mr Agaba says, "but the big advantage is that the overload drums use the same amount of energy to process a bigger load, while using less water, perhaps up to 30% less. A normal load might be five tonnes wet weight; with these drums a load could be as much as eight tonnes. And if you have less water inside the drum, you have a better concentration of chemicals and more control. In pickling, for example, you would use 6% to 7% salt. With these drums, the float is less and the concentration greater and that means I can use 4% salt." Chemical suppliers have come to Uganda and carried out trials and a look at their process sheets has shown Nelson Agaba that he is using less water and fewer chemicals than the suppliers recommend. "What's important," he says, "is to understand your own product first. People may feel they need to go with the chemical company's recipe, but



All of the hides LIU processes today come from cows raised by Ugandan livestock farmers.



The relationship between Asiatan International and LIU has developed into a strong partnership. The Guangdong-based tannery led its Ugandan supplier to the Leather Working Group and has sent its technicians, including Apple Chen, to help LIU establish a well equipped laboratory on its site in Jinja.

what I've found is that I've been able to try recipes from TFL, Lanxess, Buckman, Biokimica and, after assessing which one works best, tailor it to my needs."

Samming follows on a throughfeed samming machine from Italian technology provider 3P, located as close as possible to the tanning drums. Grading of the hides takes place after samming, then the area of each hide, by this time in the wet blue state of course, is measured because customers buy by the square-foot. The hides then go for packing, with approximately 40,000 square-feet of wet blue fitting onto one pallet for shipment. The pallets are covered in different coloured plastic wrap, depending on the grade.

LIU's general attitude to tanning machinery is that technology providers are always welcome to get in touch. The first question the company asks them about any new piece of equipment will always concern energy consumption. If output is the same or higher and energy consumption lower than what the tannery has in place already, the discussion can continue.

As for chemicals suppliers, the Ugandan company says it would like them to improve the value for money they offer. "I want to buy only what I need and no more," Nelson Agaba says. "I don't want products that will generate waste. We need it all to go into the hides or the leather. Chemical companies have to change from wanting just to sell more volume."

Raw material marketplace

All of the hides LIU uses are from Uganda, especially from the western part of the country, which Nelson Agaba talks about proudly because it's his home. Material from the eastern districts, which are closer to Jinja, also comes in, but he says the material

from the west is the best. "It's really a cultural thing," he says. "People in the east are more pastoralist in the way they rear their livestock, moving from place to place with them. In the west, cows are reared on farms and people treat the animals with love so that they will look good, live better lives, yield good milk and good meat. As a result they also yield larger and thicker hides." Huge-horned Tutsi or Ankole cattle are the usual sources of western hides, whereas in the east the smaller zebu breed of cattle predominates. Ankole hides yield an average of 34-36 square-feet of leather, while their eastern counterparts (as well as being smaller, the zebu has a hump) may give only 22-24 feet. The comparison in terms of substance is that the minimum belly thickness for an Ankole hide is 3 millimetres, compared to 1.8 millimetres for the zebu.

At normal levels, about 1,000 hides per day flow through the tannery. On average, the output from this raw material is around 400,000 square-feet per month. These figures are down by as much as 50% on those of a year ago because of a downturn in the market. "The market has come down," Mr Agaba explains. "The prices on offer at the moment from some customers are just not workable for us. We have invested heavily in the chemicals we use, going for enzyme-based products that are free from nonylphenol ethoxylates. We are the only ones in this region using chrome salts from Lanxess, but that's because we want to use self-basifying chrome; it's more expensive, but it gives good exhaustion of the chrome and it works for us. We have also invested to be able to take part in the LWG. Inevitably, this has had an impact on our costs and our pricing. One or two of our customers are giving us a premium price, others don't care. If the market were stable, we'd have no problem, but prices have dropped just at the time we've



Four tanning drums inside the LIU tanning hall.

invested and are still investing and it's hard to be competitive. However, we are sticking to our guns."

Skills and education

A total of 95 people work at LIU today, 80 in the production area (mostly men) and 15 in administration (mostly women). Almost all of them live in Jinja and come to work by bicycle, by motorbike or on foot. No one has to walk far. Working days, which are Monday-Saturday, start around 7.30 in the morning, with the workforce contracted to work eight hours per day. Mr Agaba has made it clear he doesn't mind people leaving slightly earlier to have more time with their families if all the work for that day is "satisfactorily accomplished". Jinja, about 85km east of the capital Kampala, is an interesting place to live and work: it has schools and hospitals, is on the shores of Lake Victoria, the second-largest freshwater lake in the world (after Lake Superior in North America), and is the location of the source of the White Nile.

One of the changes that Nelson Agaba made on his arrival in 2010 was to insist that all of the people LIU recruits should have "some level of education", even those going into unskilled jobs. "This was about building a culture," he explains, "about encouraging people to associate themselves with the product. So we made it mandatory for our people to have finished at least the ordinary secondary school level, which we call Form 4. This normally means staying in school until the age of 16 at least, although we don't employ anyone as young as that. Normally they come to us from somewhere else, but we still want them to have that level of education at least in their background."

Youth and graduate unemployment is a major problem in Uganda; Nelson Agaba says the rate of joblessness among younger people could be as high as 80%. His view is that it would be good if some of the international aid organisations and NGOs that are

present in Uganda were to address this problem and try to encourage entrepreneurship among young Ugandans or establish manufacturing operations and create jobs. Putting this into practice, LIU has developed a bursary programme for high-performing pupils from low-income families in the area around the tannery. Thirty local children are benefiting from this at the moment and plans are in place to expand this.

On a similar note, one of the clearest benefits to have accrued from the insistence on recruiting only people with some education is that Mr Agaba has been able to "pick out people of particular promise" and help them to make progress in their careers. Asked for an example, he mentions Ms Shina Nakivumbi. He explains: "Shina joined LIU with a qualification in electrical installation, having gone to a technical school after Form 4. I had a requirement for someone to help with electricals at the effluent treatment plant, for the small electrical installations such as pumps and so on. A local contractor used to come to help us with that work and he introduced us to Shina. She came for an interview and I was impressed by her answers, her confidence and her zeal so I gave her the job. During her stay at LIU she has undergone thorough on-job training in effluent treatment and in health and safety. Now she's been promoted to be overall in charge of environment, health and safety here; she has travelled to China to learn more about running the effluent treatment plant. The next step will be to put her back in school to study environmental law so that she can meet any challenge that comes in future from the local authorities or anyone else who comes."

The national standards bureau in Uganda recently took the decision to accredit LIU's laboratory as an independent testing centre for third-party companies. Within the leather industry, it has hosted training events for other Ugandan tanners, some of whom have sent word afterwards to give details of ideas that they have



Just visible through the trees, the tannery is located less than 200 metres from the precious and vulnerable resource that is Lake Victoria.



Leather Industries of Uganda operations manager, Nelson Agaba.

picked up at these events and been able to put into practice in their own operations.

Ongoing environmental improvement

Efforts to make the production flow inside the tanning hall as smoothly and as logical as possible are clear. Even more in evidence are the initiatives outside the tannery to continue LIU's environmental improvements. At the start of 2017, in partnership with DEG, a German organisation that seeks to promote business initiatives in developing and emerging market countries, LIU launched a project to expand its effluent treatment plant. This environmental improvement project is due for completion later in the year and involves the installation of a large, new aeration tank and a new denitrification system to help bring the chemical oxygen demand (COD) levels down. A proportion of the treated water from the new effluent treatment plant may go back into the factory for reuse in production. All of this is a clear indication of what Nelson Agaba calls "a change in our mindset". He explains: "Tanneries have had to close down because they didn't have good enough facilities for managing their effluent. But as long as you can manage your effluent, you can keep going. So, the way in which we have begun to think about our business now is as operating a wastewater treatment plant with a tannery attached."

He supports what he perceives as an increased level of attention on effluent treatment plants and points out that the trend among tanners, particularly in some of the most developed economies in the world, to work only from wet blue to finished leather does not exonerate them from the obligation to have wastewater treatment facilities in place. The need exists, even though effluent from a raw hide to wet blue operation will be more organic, whereas from wet blue to finished it will be more inorganic. Nor should the existence of a common effluent treatment plant excuse tanners from their

obligations. Mr Agaba supports moves to make common effluent treatment plants part of LWG audits. "It's not enough to pay third parties and leave them to get on with it," he insists.

The future of leather manufacturing

There are aspects of the future prospects for manufacturing in general and leather production in particular in Uganda that Mr Agaba finds it hard to be optimistic about. There is competition from synthetic materials that is affecting demand for leather, although he is quick to point out that this is a global problem. More specific to Africa, and certainly to Uganda, is what he refers to as "a deficient spirit of nationalism". He explains that consumers in this part of the world don't really appreciate domestically produced goods. "We have hides here," he explains, "and we can add value to them. It would be good to add even more value than we do at the moment and produce finished leather and, beyond that, finished products. But if we put 'made in Uganda' on a shoe consumers here would not buy it. Put 'made in Italy' on the same shoe and it would sell like hot cakes." LIU's associate tannery in Kenya finishes some of the company's wet blue for the Ugandan market, but a lack of finished leathergoods manufacturers limits the demand for finished leather in Uganda. "Sometimes it seems hard to imagine how this can grow," he continues, "but on the other hand I believe that people who have used leather realise it's good for them. Leather has been around for millennia and the manufacturers of synthetic alternatives cannot say that about their products. We are in a downturn now, but leather will continue."

Buyers' views

Asiatan International, based in Guangdong province in China, has been LIU's biggest customer for some time. It's a company that processes from wet blue to finished leather, supplying major



Fleshings used to be dumped in pits dug into land 50 metres from the tannery. They now go into a specially made drying tank with a concrete base, where birds, including eagles and the striking Marabou stork (see inset), eat them. CREDIT: LIU, INSET CREDIT: CHARLESJSHARP / WIKIPEDIA

international footwear brands. Encouraged by its own engagement with the LWG, from whom it has a gold rating, to take steps to move its wet-end partners towards accreditation, Asiatan also introduced LIU to the multi-stakeholder body.

The Chinese tannery sources wet blue from a wide variety of suppliers around the world and Nelson Agaba feels confident LIU's contribution will continue to be in demand. If Asiatan can make lightweight leathers from Ugandan wet blue and if this type of material is in demand, particularly among athletic footwear brands, then LIU will be Asiatan's sole Ugandan supplier, thanks to its commitment to cleaner production and to the environment, the head of operations insists.

"Ugandan material works for light leathers," Mr Agaba says. "Sports shoes are a particularly good market because lightweight material is important there. But Asiatan has made it clear to us that, for it to continue to do business with LIU, it needs us to uphold its commitment to environmental protection and pollution control. If we can't protect the environment, we lose Asiatan's business. This is beyond an LWG rating; it's about the future of our world. Nevertheless, Asiatan is a partner, not just a customer. It's an establishment of best practice. It has opened its doors to us on many occasions to allow us to learn from its set-up and I now regard the people there as my friends." The remainder of LIU's wet blue goes at the moment to customers in the East African region.

Mr Agaba views innovation as one of the key components of any strategy to boost consumers' appreciation of leather, but he also believes in the importance of emphasising the material's natural qualities. The connection between human beings and leather is strong, he says, as is the connection with the animals from which the leather we use comes. "Leather is organic and has the essence of life. Polyurethane is not leather and should never be presented as leather. Leather has never been synthetic."

New horizons

An exciting new customer opportunity may soon come LIU's way thanks to a partnership it is building up with Italian leather chemicals manufacturer Biokimica. Its work with Biokimica represents what Nelson Agaba refers to as yet another good example of a partner that is committed to openness, to sharing and to innovation. "We are still working on this, but it's very promising," he says. "Biokimica came to see us, like many other suppliers. We always welcome these companies because we are keen to learn from them. But Biokimica's approach was different. You could see that this supplier was not only looking to sell product but was genuinely interested in working with us, working jointly, and in helping us find a new, potentially lucrative market for our product."

Production trials using Biokimica chemicals produced a clear reduction in wrinkles in the neck area of the wet blue hides, giving the material a noticeably flatter look. It was something that Mr Agaba had not witnessed before and something he says he would have needed to see with his own eyes to believe it. Next, Biokimica took samples of LIU wet blue back to Italy to continue trials to the finished leather stage at its own facilities in Santa Croce. These trials, too, have proved successful and Biokimica soon began to show the hides off during customer visits and at industry events to show people what it is possible to do with Ugandan hides. "And now a customer, a producer of finished leather in Italy, has placed an order with us," Mr Agaba continues. "This has all happened through Biokimica and we hope this partnership will continue to grow."

Trees, monkeys and storks

LIU's tannery is less than 200 metres from the shore of Lake Victoria; some wetland separates them, wetland that the leather manufacturer says it needs to act as a buffer to make sure it avoids any leakage from its wastewater from going into the lake, for



The LIU laboratory will soon receive the accreditation required to carry out third-party testing on behalf of other manufacturers.



The workforce at LIU has taken part in extensive tree-planting exercises as part of a wider programme called 'Giving Back to Nature'.

example during a period of very heavy rain. It wants to protect these wetlands, which are home to diverse flora and fauna.

Thanks to the improvements in environmental management that Nelson Agaba has led, the wetland between the tannery and Lake Victoria has become healthier in recent years. As part of a programme the company calls 'Giving Back to Nature', members of staff have taken part in extensive tree-planting exercises at the site (as well as in other parts of Jinja). Fruit trees, pine trees, eucalyptus, grevillea and a species of African teak, mvule or iroko, have all been planted as part of the programme, either at the tannery or across the town.

Another improvement initiative concerns fleshings, of which the tannery can generate three tonnes (when wet) per day, reducing to a weight of 600 or 700 kilos when dry. These fleshings used to be dumped in pits close to the tannery, a far from ideal solution. The pits are now filled in and covered with grass and surrounded by some of the 'Giving Back to Nature' trees. Workers often sit outside on this grass during breaks when the weather is fine, proving that there is no ongoing environmental problem there. As for the fleshings, they now go onto a specially built drying base with a concrete floor to dry out more effectively before being packed into bags to be taken off site for dumping by a NEMA-licensed contractor. Trials involving cleaning and grinding up these fleshings to help farmers in Uganda source much-needed animal feed for poultry and pigs have proved interesting and this is an avenue the company may pursue in the near future, possibly also taking fleshings off other tanneries in the area to add to the mix (helping neighbouring tanneries alleviate a waste problem as well as helping the farmers). Monkeys have returned to the immediate area around LIU after an absence of some years, another indication that the environment around the tannery is now in much better balance than it was a few years ago.

However, one unexpected consequence of this improvement, which naturally includes an improvement in the air quality around LIU, was that a group of people decided to set up home on the wetland immediately beside the factory. When Nelson Agaba explained that, sympathetic though he was to their plight, the land needed to remain uninhabited because of its status as a buffer zone between the tannery and the lake, his message went down badly. "I was threatened with violence," he says. "There must have been around 1,000 people living there at one point, with makeshift houses stretching almost to the lakeshore. But we upheld our constitutional right as the immediate neighbour to protect the lake and the buffer zone from degradation and moved them off. It simply wasn't a suitable place for humans to search for habitable land, destroying the wetland and polluting the lake while doing so."

An example to follow

In the last few years, LIU has done more than improve its own performance. It has become a landmark for Uganda, for East Africa and perhaps for the whole continent. "Our strategy is to consider the environmental aspects first," the head of operations says, "and all other things come after that. Given our past, because this used to be a badly functioning tannery, to where we are now, given our efforts to save the wetland, to adopt the best technology we can to combat pollution and all our efforts to use our investment in innovation to make us more environmentally friendly, I feel sure that we are a good example. Others are learning from us and we are happy to share."

Niaz Hirani's concluding remark is that, as IPS continues to recognise the importance of the leather sector in the context of development, it will explore ways to invest further, expanding its interest in this value chain. 🌱